

WHAT IS CLAIMED IS:

1. A swinging seat with resilient suspension, comprising:
 - a seat having at least a bottom for supporting one or more persons sitting thereon; and
 - a pair of suspension members having lower ends attached to opposite ends of the seat and upper ends adapted to be attached to a ceiling structure for suspending the seat therefrom;
 - at least one adjustable tension suspension device between said suspension members and said ceiling structure wherein said adjustable tension suspension device comprises a spring tension adjuster, a spanner and at least one coil spring there between.
2. The swinging seat of claim 1 wherein said coil spring has a plurality of coils defining at least first and second zones of differing initial spring constant, the first zone being formed by coils providing a first initial spring constant when said coils are initially stretched, the second zone being formed by coils providing a second initial spring constant substantially greater than the first initial spring constant when said coils are initially stretched, whereby the two zones provide a desired level of

resilience for a wide range of weights supported on the seat.

3. The seat of claim 2, wherein the coils in said first and second zones are wound helically about an axis of the spring and the coils in said first zone are wound at a diameter from the axis that is substantially greater than that at which the coils in said second zone are wound.

4. The seat of claim 1 wherein said spring tension adjuster comprises suspension locators for position said coil spring along said spring tension adjuster.

5. The seat of claim 4 wherein said suspension locators are notches.

6. The seat of claim 1 comprising two said coil springs between said spring tension adjuster and said spanner.

7. The seat of claim 6 wherein said two coil springs each have a different spring constant.

8. A swinging seat with resilient suspension, comprising:

a seat having at least a bottom for supporting one or more persons sitting thereon; and

a pair of suspension members having lower ends attached to opposite ends of the seat and upper ends adapted to be attached to a ceiling structure for suspending the seat therefrom;

at least one adjustable tension suspension device between said suspension members and said ceiling structure wherein said adjustable tension suspension device comprises a spring tension adjuster, a spanner and a coil spring there between; and

wherein said coil spring has a plurality of coils defining at least first and second zones of differing initial spring constant, the first zone being formed by coils providing a first initial spring constant when said coils are initially stretched, the second zone being formed by coils providing a second initial spring constant substantially greater than the first initial spring constant when said coils are initially stretched, whereby the two zones provide a desired level of resilience for a wide range of weights supported on the seat.

9. A swing comprising an adjustable tension suspension device comprising:

a spring tension adjuster, a spanner and a coil spring there between; and

wherein said coil spring has a plurality of coils defining at least first and second zones of differing initial spring constant, the first zone being formed by coils providing a first initial spring constant when said coils are initially stretched, the second zone being formed by coils providing a second initial spring constant substantially greater than the first initial spring constant when said coils are initially stretched.

10. The swing of claim 9 wherein said coil spring is positioned along said spring tension adjuster.

11. The swing of claim 9 comprising a second coil spring.

12. The swing of claim 9 comprising a link between said spring tension adjuster and said spanner.

13. The swing of claim 12 wherein said link is an arrest link.

14. The swing of claim 9 wherein said spanner is a spring tension adjuster.

15. A method for converting a swing to an adjustable tension suspension swing comprising:
removing a suspension device between said swing and a fitting;

inserting an adjustable tension suspension device between said swing and said fitting wherein said adjustable tension suspension device comprises:

a spring tension adjuster, a spanner and a coil spring there between; and

wherein said coil spring has a plurality of coils defining at least first and second zones of differing initial spring constant, the first zone being formed by coils providing a first initial spring constant when said coils are initially stretched, the second zone being formed by coils providing a second initial spring constant substantially greater than the first initial spring constant when said coils are initially stretched, whereby the two zones provide a desired level of resilience for a wide range of weights supported on the seat.

16. The method for converting a swing to an adjustable tension suspension swing of claim 15 further comprising:

attaching a second coil spring between said spring tension adjuster and said spanner.

17. The method for converting a swing to an adjustable tension suspension swing of claim 15 further comprising:

attaching a link between said spring tension adjuster and said spanner.

18. A kit for converting a swing to an adjustable tension suspension swing comprising:
at least one spring tension adjuster, at least one spanner and at least one coil spring for inserting there between; and

wherein said coil spring has a plurality of coils defining at least first and second zones of differing initial spring constant, the first zone being formed by coils providing a first initial spring constant when said coils are initially stretched, the second zone being formed by coils providing a second initial spring constant substantially greater than the first initial spring constant when said coils are initially stretched, whereby the two zones provide a desired level of resilience for a wide range of weights supported on the swing.

19. The kit of claim 18 further comprising a link.

20. The kit of claim 19 wherein said link is an arrest link.

21. The kit of claim 18 wherein said coil spring is positionable along said spring tension adjuster.